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***“A firm understanding of how RFID will be used and to what end is imperative. You have to look at the potential benefits, set goals and have a good grasp of how deploying RFID will mesh with your strategic values.”***

Bill Allen, Texas Instruments RFID Systems, Stores Magazine, May 2004

***“Companies that take a more simplified and focused approach to the use of RFID technology in their organizations incur much less risk in implementation, receive tangible value, and build capabilities that give them significant differentiation from their competitors.”*** *“Finding the ROI in RFID”, by Jon Fontanella and Matt Bilodeau, AMR Research, October 31, 2003*

## “From Identification to Insight . . . Retailers’ Eye the ROI Roadmap for RFID-EPC”

As the level of retail competition gets fiercer, many retailers are looking for new methods, in both technologies and business processes to gain a competitive advantage. Whether your perspective is from the sales floor, the warehouse, the finance department, information technology or merchandising, your focus revolves around improved performance and ROI. Retailers must continually identify new methods and approaches to conduct their business faster, smarter and at a lower cost – all the while achieving customer satisfaction.

Today, given the competitive landscape, even the smartest retailers need to make even smarter decisions. RFID-EPC has been identified as a potential enabler to reaching these new heights. However, without constructing a cohesive data infrastructure that leverages business intelligence tools the ROI will be difficult, if not impossible to achieve.

To protect the initial investment and realize maximum long-term ROI, retailers need to ensure that they base their RFID-EPC strategy on sound information architecture – an architecture that adapts to changes in technology, standards, and business dynamics, providing a ‘single source of truth’ that ensure all parts of the business benefit from what RFID-EPC has to offer.

As retailers eye the ROI Roadmap, the sustainable competitive advantage depends on how effectively all this RFID-EPC data can be translated into valuable operational intelligence.

### Answering the “Right” Question

*“The right product at the right place at the right time at the right price.”* The retail industry’s mantra for competitive advantage has turned into a never ending conundrum for most retailers. While the industry long ago discovered that having the right products in-stock provided the number one ingredient to meeting customer expectations, developing the solutions has proven to be far more daunting. Determining what makes right “right” has proven to be the \$64 million question.

The business questions in determining “right” are many. For example:

- How much product is required where and when throughout the supply chain to achieve desired in-stock rates while maximizing inventory turns and cash flow?
- How are promotion quantities best managed given the elasticity of the suppliers’ ability to supply and the retailers’ ability to physically stock and maintain?
- How does global sourcing impact the existing supply chain? Once at store level, how is fresh or fashion sensitive product managed?

It's no secret that many retailers continue to struggle mightily in addressing the right product, right place, right time, and right price conundrum. Despite an industry wide focus, all but a few retailers have made real progress in the battle against stock-outs. Many continue to maintain expensive safety stock levels, due to imbalanced stock and sales ratios, leaving shoppers empty handed.

Today, RFID-EPC technology is portrayed as the next transforming technology in retail. Not since the inception of the bar code twenty-five years ago, has so much been promised for an evolving technology. RFID-EPC is anticipated to deliver greater supply chain visibility by automating and simplifying data collection. The value companies anticipate from RFID-EPC stems from the ability to collect data, more frequently and at more granular levels of detail, all at a reduced cost. Improving customer service and restoring top-line sales losses due to stock-outs (typically 8 – 15 percent of sales) will cause even the most cynical to take note.

And while the initial RFID-EPC vision is focused on the physical tracking of product, the bigger picture promotes the ability to better isolate the status of products or assets at any point in the supply chain through sensors that measure temperature, humidity, etc. Given this powerful proposition, RFID-EPC technology can have a significant impact both short- and long-term on the retail supply chain.

Certainly the early RFID-EPC hype is having an impact on leading retail operators like Wal-Mart, Target, Metro Group, Albertsons and Best Buy. Each has publicly mandated or announced aggressive programs to incorporate RFID-EPC technology into their operations. This has brought many suppliers under a lot of pressure to adopt RFID-EPC systems today, although the business benefits have not yet been defined. As a result, many of these suppliers are responding with stovepipe “slap and ship” solutions – a “cost of doing business” that are not linked with overall business objectives and systems, thus undermining efforts to deliver business benefit for the entire value chain. But clearly, the overall business value goes far beyond the availability of information.

## **The ROI Roadmap**

What can spell the brightest future and ROI for RFID-EPC? It is recognizing that RFID-EPC can be a key enabler helping retailers define the “right” in right product, right place, right time and right price. Wal-Mart is estimating that getting it “right” through RFID-EPC and business intelligence tools equates to an annual savings of \$8.35 billion – that's more than the total revenue of half the companies in the Fortune 500. Savings could be \$600 million through avoiding stock-outs; \$575 million by avoiding theft, error and vendor fraud; \$300 million through better tracking of a billion pallets and cases; \$180 million through reduced inventory; and a \$6.7 billion in labor savings by not having people scan barcodes in the supply chain and at store level.

To crack the code, key external (customer) and internal (operational) insights are required. While the RFID-EPC acronym promotes identification, the technology can become more synonymous with “insight,” provided that retailers employ the ROI Roadmap and take both a bottom up and top down approach during the planning and implementation effort. The ROI Roadmap can provide the “single source of truth” that is required to draw actionable insights.

The ROI Roadmap spans the following capabilities:

### **Capture Information**

The ability to capture data from the RFID-EPC readers and filter it appropriately before being passed to a common data store where it is analyzed and made available to all business applications.

### **Manage Information**

The ability to manage information securely and reliably -- allowing business users to transform, distribute, query, and audit specific events occurring in the system.

### **Analyze Information**

The ability to deliver real-time operational insight and intelligence.

### **Access Information**

The ability to provide a unified workplace allowing employees, partners and suppliers to collaboratively plan in real-time.

### **Respond to Information**

The ability to manage by exception, respond to events and collaborate in real-time to reduce risk and maximize opportunities. Systems need to be integrated together to streamline and automate business processes and provide model-based, event tools for business process management and activity monitoring.

The ROI for RFID-EPC will be directly proportional to the planning and implementation path. Turning this capability into a sustainable competitive advantage depends on how effectively all the RFID-EPC data can be transformed into valuable operational intelligence, such as forecasting and inventory management, and made available to all enterprise systems, applications and business users. The ROI is achieved by properly aligning overall business objectives, leveraging current investments, surfacing information within all business applications and optimizing and automating manual business processes.

Deployed correctly, business intelligence enables retailers to gain timely and accurate insight into business operations, from warehouse to shop floor. Ultimately, this should lead to greater business profitability for both retailer and supplier. Capturing data uniquely down to the item level at multiple points in the supply chain (e.g. customer level, store level, retailer level, supplier level, materials level) will create the need for a data warehouse that is scalable and that can contribute to a logical amalgamation of data.

Most current pilots within the retail industry are taking a bottom up approach by starting at the identification level solely and building a system that gathers data at many available points along the supply chain. In most cases this is driven by the tight time schedule associated with compliance mandates or because of perceived competitive threats.

However, to obtain the required insights, retailers should be more pragmatic by taking a top down approach at the same time. To identify the business questions that they want to be capable of responding to and the insights that are required to help craft solutions. Each retailer's business processes, culture, and organizational capabilities have evolved over time. They have been built up over years of unique strategic choices, differentiation efforts and core competency development. Said simply, their pain points in addressing the "right" question are different and unique. As each retailer sets their implementation efforts, each plan should be tuned to their own unique business opportunities.

As is well documented, Prada, the chic New York fashion retailer, made the mistake of going solely with "tagging products" and betting too heavily on the RFID-EPC technology alone. "Central to Prada's high-tech problems is the retailer's approach to RFID-EPC. In short, they tried to do too much too quickly and, along the way, the technology created business disruptions instead of easing processes." (Stores Magazine May, 2004)

The questions that need to be posed in each retailer boardroom and amongst retail supply chain partners are:

- Where, specifically, internally and/or externally are the pain points?
- What do we need to have access to that we don't have today?
- And would a resolution of that pain point(s) make a significant customer and financial impact on the retail business?

Is it that we don't know the right styles or right size breakouts by store or geography? Could it be that inventory levels by department are difficult to manage due to changing rates of sale throughout the year? Are labor costs limiting our ability to competitively price our goods? Are products being mislaid in the backroom contributing to stock-outs on the sales floor?

Often the pain points that surface are not far different between retailer and supplier. RFID-EPC offers all supply chain participants the opportunity to work collaboratively to address business opportunities. A business intelligence model that works across both retailer and supplier promotes a unified workplace that can exponentially derive customer and operational insights and drive ROI.

Retailers are recognizing that addressing the pain points is the starting place for employing RFID-EPC technology and that the ROI will not be there unless the technology is matched with the right business intelligence model and tools. Answering the "right" question correctly requires a single source of truth across the ROI Roadmap.

### **A Single Source of Truth**

Having a common unified view of information seems simple enough. In retail, the importance of a single source of truth is more amplified given the wide range of customers, low gross margins, the number of SKUs and the large number of transactions. The value lies in understanding all the elements and attributes of the customer and the products and using that insight to fundamentally change the way business is done.

Today, as many retailers go beyond the traditional four walls of retail and expand their reach to include catalog and online – retailers have come to realize the value of a single view of the business. With reliable information all functional executives will be lead to better internal and external collaboration and planning for improved decision making.

Constructing a cohesive data infrastructure that delivers a single source of truth is not as daunting as may initially appear. The convergence of Internet computing, reductions in processing costs and more powerful software make it conceivable to have a true enterprise version of truth. Best of all, this line of truth can be updated and accessed in near real-time across geographies and divisions without the maintenance costs associated with client-server computing. This is increasingly valuable as retailers integrate more channels and their business extends globally.

Today's retail business focus is about increasing revenue and finding new and better ways to manage the business. However, while many retail CIO's feel limited by the fact that many are still tied to mainframe or legacy systems that are based on proprietary hardware and software, creating the right infrastructure can actually offer a reduced cost of ownership opportunity.

Retailers can reduce costs by moving to open systems that provide the flexibility to select a hardware vendor and operating system independently of the intelligence software decision. Flexible systems provide more ability to customize the solutions to meet the unique questions and challenges of each retailer. Additionally, by adopting the open system infrastructure, they can lower management costs by reducing the reliance on proprietary skills that are generally less available in the market.

Turning the massive potential promised by RFID-EPC into sustainable competitive advantage depends on how effectively RFID-EPC data can be turned into valuable operational intelligence and insight.

## **Summary**

The retail landscape continues to change due to consolidation, globalization, multi-channel retailing and heightened customer expectations to name a few. No doubt, retail will continue to become more and more competitive, thus how business information is leveraged equally needs to change. Retailers will benefit from making fact-based decisions in a fraction of the time, and be able to respond to customers and suppliers more quickly. With higher quality information, based on a single source of truth, this will lead to intelligent insight. Thereby, taking out complexity and cost, while providing retailers with the ability to make the precise decisions on the right products, right price, right place and at the right time is the path to real value.

Learn more about how Oracle Business Intelligence and RFID solutions deliverable actionable insight to retailers. Call toll-free 1-800-ORACLE1 and visit us at <http://www.oracle.com/industries/retail/index.html>.